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In re Application of:	§	
	§	Examiner:
JERRY WALTER MALCOLM	§	
	§	
Serial No.: **TO BE ASSIGNED**	§	
	§	Art Unit:
Filed: **HEREWITH**	§	
	§	
For: **GROUPING SELECTED**	§	
TRANSACTIONS IN	§	
ACCOUNT LEDGER	§	

TRANSMITTAL LETTER

BOX: PATENT APPLICATION
Asst. Commissioner for Patents
Washington, D.C. 20231

Dear Sir:

Enclosed herewith for filing in the above-identified case are:

- Specification containing 15 pages of description, 7 pages of claims and 1 page of abstract;
- 6 sheets of drawings;
- Declaration And Power Of Attorney For Patent Application;
- Form PTO-1595;
- One joint Assignment from the inventors to IBM Corporation; and
- Our return postcard, which we would appreciate your date stamping and returning to us upon receipt.

GROUPING SELECTED TRANSACTIONS IN ACCOUNT LEDGER

BACKGROUND OF THE INVENTION

1.   Technical Field:

5   The present invention relates in general to accounting software including personal finance managers and in particular to reconciliation of external statements with accounting software records.   Still more particularly, the present invention relates to a method and apparatus for reconciling external statements to groups of transactions within accounting software records.

2.   Description of the Related Art:

15   Financial transactions are commonly recorded in data processing systems using software accounting packages. Examples include personal finance managers such as Quicken, Microsoft Money, and Minding Your Money.   In such personal finance managers, users record transactions such as checks, deposits, and automatic teller machine withdrawals.   The personal finance manager software typically includes functions for balancing accounts and reconciling the records to bank statements received by the user.

25   A problem arises in the reconciliation process where an external statement consolidates multiple transactions recorded separately in the accounting software.   Often a deposit or other financial transaction is entered as multiple separate entries in a user's accounting software ledger.   For example, a user with 10 checks to deposit will enter the checks individually in the ledger for auditing, tracking, budget

management, and other reasons.

When the deposit is made at the financial institution, however, such as the user's bank or credit union, only one deposit entry is entered into the account for the total deposit amount. When reconciling the account, the account statement contains only a single deposit amount that does not match any deposit amount in the software ledger. The customer must manually total individual unmatched entries via calculator or hand calculation to determine which combination of multiple entries matches the single statement entry.

Another common situation where multiple transactions may be consolidated and create problems for account reconciliation is payment of invoices. Frequently businesses will pay several invoices received for goods or services with a single check, or may pay for specific items within an invoice rather than paying the entire invoice. The invoicing entity is then required to determine to which outstanding invoices or items within an invoice a received payment is to be applied.

A further, unrelated problem in personal finance managers arises from the limited capability of users to group trans-actions for special treatment. Most personal finance managers allow transactions to be categorized for the purposes of budgeting or expense tracking. For example, users may classify transactions as mortgage or auto payments for the purposes of viewing such categories separately as a portion of total expenses.

Generally, however, transactions may not be grouped independently of the categories for the purposes of detailed

analysis.   For example, a user may wish to group fixed
recurring expenses, such as mortgage and auto payments, and
variable recurring expenses, such as groceries and dry-
cleaning, separately for the purposes of manipulating a
5   monthly budget.

An additional consideration is introduced by the fact
that personal finance managers are evolving. Traditional
personal finance managers are designed to operate on stand-
10   alone data processing systems with transactions manually
entered and reconciled by the user, although some personal
finance managers are beginning to offer support for
electronically downloading transactions and partial
reconciliation between local and bank ledgers. Additionally,
15   banks are beginning to offer electronic services for accounts
via dialup access, such as "PC Banking," a service offered by
NationsBank Corporation. Moreover, efforts are being made--by
the consortium Integrion, for example--to establish electronic
banking services over the Internet.

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In view of the proliferation of such electronic banking
services, it is anticipated that personal finance managers
will be augmented to provide new features. One feature anti-
cipated is more fully automated account reconciliation between
25   a bank's records and a user's local account ledger.   To
provide such a feature, however, a mechanism for reliably
correlating transactions should be established to minimize the
user involvement required in the reconciliation.

30   It would be desirable, therefore, to provide a method and
apparatus for facilitating reconciliation of external account
statements or records with local accounting software ledgers

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where multiple entries may be consolidated within the external statement or records. It would further be advantageous to provide a method of grouping transactions within an accounting software ledger for purposes other than account reconciliation.

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SUMMARY OF THE INVENTION

It is therefore one object of the present invention to provide improved accounting software.

It is another object of the present invention to provide an improved method of reconciling external statements or records with local accounting software records.

It is yet another object of the present invention to provide an improved method and apparatus for reconciling external statements or records to groups of transactions within local accounting software records.

The foregoing objects are achieved as is now described. At the time transactions are entered into accounting software data records, a user is given the option of creating a transaction group for transactions expected to appear in an external statement as a single entry. A persistent record of the association of selected transactions is maintained in the data records, and a total for transaction groups is displayed to the user during the reconciliation of the data records with the external statement. The user may then easily reconcile multiple entries in the data records which were consolidated in the external statement.

The above as well as additional objects, features, and advantages of the present invention will become apparent in the following detailed written description.

BRIEF DESCRIPTION OF THE DRAWINGS

The novel features believed characteristic of the invention are set forth in the appended claims. The invention itself however, as well as a preferred mode of use, further objects and advantages thereof, will best be understood by reference to the following detailed description of an illustrative embodiment when read in conjunction with the accompanying drawings, wherein:

Figures 1A-1B depict a network and data processing system in which a preferred embodiment of the present invention may be implemented;

Figures 2A-2B are pictorial representations of transaction entries for accounting software in accordance with a preferred embodiment of the present invention;

Figure 3 depicts a high level flowchart for a method of creating transaction groups in accordance with a preferred embodiment of the present invention; and

Figures 4A-4B are high level flowcharts for a method of reconciling data records with an external statement or records in accordance with a preferred embodiment of the present invention.

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DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

With reference now to the figures, and in particular with reference to **Figure 1A**, a network in which a preferred embodiment of the present invention may be implemented is depicted. The network includes a user unit **102** connected via communications link **104** to the Internet **106** and acting as an Internet client. Communications link **104** may, for example, be provided in the form of access service by an Internet Service Provider (ISP). Also connected to Internet **106** via communications link **108** is Internet server **110**, which includes a storage device **112** such as a hard disk drive.

In the exemplary embodiment, Internet server **110** functions as a World Wide Web (WWW) server employing the HyperText Transmission Protocol (HTTP) to provide access to data formatted in the HyperText Markup Language (HTML) to Internet clients such as user unit **102**. Such data--units of which are colloquially referred to as "Web pages"--may include text, graphics, and forms for querying databases. The data may be passed via a series of servers within Internet **106** to user unit **102**, and thus appropriate security measures should be provided.

Internet server **110** in the exemplary embodiment is employed to provide customers of a banking institution with access to account records maintained on storage device **112**. Software operated on user unit **102**, server **110**, or both operates in accordance with the present invention to permit creation of group transactions for account reconciliation or other purposes.

Although an embodiment utilizing the Internet has been depicted for the purposes of describing the invention, those skilled in the art will recognize that the present invention may be employed in other types of networks, including networks in which access to a server maintaining account records is provided through direct dial-up access to the server.

Figure 1B depicts a data processing system in which a preferred embodiment of the present invention may be implemented. Data processing system **114** may be employed as user unit **102** within the network depicted in **Figure 1A**, or as server **110**. Modifications to the embodiment depicted may be appropriate depending on how data processing system **114** is utilized. Alternatively, data processing system **114** may be employed as a stand-alone unit in which the present invention may be implemented.

Data processing system **114** includes a processor **116** having internal level one data and instruction caches *118* and **120**. Processor **116** is connected to a level two (L2) cache **122**, which is connected via system bus **124** to system memory **126** and to bridge **128**. Memory mapped devices, such as graphics adapter **130** connected to display unit **132**, may also be connected to system bus **124**.

Bridge **128** connects system bus **124** to input/output (I/O) bus **134**. Various peripherals may be connected to I/O bus **134**, such as hard disk drive **136**. Keyboard/mouse adapter **138** connected to I/O bus **134** allows a keyboard **140** and pointing device **142** such as a mouse or trackball to be connected to data processing system **114**. Network adapter **144** connected to I/O bus **134** allows data processing system **114** to be connected

to a local area network (LAN) or the Internet.

The operation of data processing system **114** is well known to those skilled in the art. Furthermore, those in the art
5   will recognize that the components depicted in the exemplary embodiment may be varied for purposes of specific applications. For example, additional peripheral devices such as a CD-ROM drive may be incorporated into data processing system **114**. In accordance with a preferred embodiment of the present
10   invention, data processing system **114** includes accounting software such as a personal finance manager with the functionality described below.

Referring to **Figure 2A**, a pictorial representation of
15   transaction entries within an account ledger for accounting software in accordance with a preferred embodiment of the present invention is illustrated. The view depicted may be employed by the user interface of the accounting package to graphically represent the transaction entries.

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In the example depicted, the display **202** of transaction entries includes column **204** for transaction identifiers, such as a check number. Column **206** is provided for a description of the transactions, while an amount for the transactions may
25   be entered in column **208**. An additional column **210** may display the total for a range of transactions, selected as described below.

The accounting software of the present invention provides
30   support for "transaction groups," user selected groups of multiple transactions for which an association is persistently maintained. In the case of a deposit of multiple checks, for

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example, the user, when entering the individual checks as transactions in the software accounting ledger, would be aware that all of the checks were going to be deposited at one time and would therefore appear on the bank statement as a single

5 entry. The user may therefore "rubber band" **212** the multiple transactions by a click-and-swipe select, or use any other form of multi-select such as clicking on each transaction while holding the CTRL, ALT, or SHIFT key.

10 After the user selects the multiple transaction entries expected to appear as a single deposit, the user then actuates a "Group Selected Entries" option. Actuation of this option would create a persistent association of the transaction records within the accounting software data records utilizing

15 methods known in the art. As a specific example, if the accounting software employs an object oriented user interface, a container object may be instantiated to contain the data records associated with the selected transactions. The persistent association of transaction records creates a

20 transaction group having a dual character: it may be treated as a single transaction, with a group transaction total being displayed or otherwise employed, or it may be treated as a plurality of individual transactions, with individual transaction records for each transaction. Treatment of the trans-

25 action group may thus be selectively altered depending on which treatment best suits a particular purpose.

In the exemplary embodiment of the present invention described in connection with **Figures 1A-1B** above, the

30 persistent association of transactions to form a transaction group is best maintained within a local account ledger in user unit **102**. For automated reconciliation with bank records

maintained in server **110**, the transaction group appears to be and is treated like any other single transaction. Functionality within user unit **102**, activated at the end of an automated reconciliation process, may make appropriate modifications to the records for individual transactions belonging to group transactions which have been reconciled. As a specific example, the state of the individual transactions (reconciled or unreconciled) may be changed by altering a flag associated with the transactions.

Once the transactions have been associated as a group, the accounting software may optionally provide a visual cue to the transaction group, such as the highlighted outline **214** depicted in **Figure 2B**. Other known methods of visually distinguishing the transaction group from other displayed data records may also be utilized.

As depicted in **Figure 2B**, a visual que **216** may also be provided to the user regarding the state of individual transactions. In the depicted embodiment, a check mark is displayed for those transactions which have been reconciled. The functionality described above for modifying records associated with individual transactions within a transaction group may result in a change of the indicated state for the individual transactions. Thus, individual transactions within a transaction group **214** will reflect a uniform condition, either all reconciled or all unreconciled.

With reference now to **Figure 3**, a high level flowchart for a method of creating transaction groups in accordance with a preferred embodiment of the present invention is depicted. The process begins as step **302**, which depicts the transactions

being entered by the user. The process next passes to step
304, which illustrates selection of the transactions to be
grouped, and then to step **306**, which depicts associating the
data records corresponding to the selected transactions within
the database of the accounting software. The process passes
to step **308**, which illustrates the optional step of providing
a visual cue to the transaction group, and then to step **310**,
which depicts the process becoming idle until another trans-
action group is to be created.

Referring to **Figures 4A-4B**, high level flowchart for a
method of reconciling data records with an external statement
in accordance with a preferred embodiment of the present
invention is illustrated. **Figure 4A** depicts the process
implemented for manual account reconciliation. The process
begins at step **402**, which depicts initiation of reconciliation
of the accounting software data records with the external
statement. The process then passes to step **404**, which
illustrates identification of unreconciled transactions within
the data records of the accounting software.

The process next passes to step **406a**, which depicts a
determination of whether the unreconciled transactions within
the accounting package data records include any transaction
groups. If so, the process proceeds to step **408a**, which
illustrates displaying the totals for the transaction groups
for the user to match with entries in the external statement.
If not, however, the process simply proceeds to step **414**,
described below.

From step **408a**, the process next passes to step **410**,
which depicts a determination of whether the user has

indicated a match between any transaction group and an entry in the external statement. If so, the process proceeds to step **412**, which illustrates marking each transaction in the transaction group reconciled. If not, the process passes to step **414**, which depicts the process becoming idle until a subsequent reconciliation is initiated. Note that steps **410** and **412** would be performed for every transaction group within the accounting software data records which the user indicates matches an entry in the external statement.

Figure 4B depicts the process implemented for automated account reconciliation in the exemplary embodiment depicted in **Figures 1A-1B**. The reconciliation is initiated (step **402**) and unreconciled transactions within the local ledger in a user unit ("user transaction records") are identified (step **404**). The process then passes to step **406b**, which illustrates retrieving transaction records from the server located at the account holder's bank. This step may be accomplished, for example, by copying selected information from the bank's transaction records (such as the date and amount of the unreconciled transactions) into a small, searchable database which is then transmitted from the server to the user's data processing system. Limitations on the transaction information retrieved may be employed to keep the retrieval manageable, such as only retrieving information relating to transactions dated after the last bank statement was mailed or after the last reconciliation. The retrieval process may be initiated by a request formatted in HTML.

The process then passes to step **408b**, which depicts determining any matches which may be ascertained between the information from the user transaction records and any

corresponding information in the account transaction records maintained at the bank's server. The process then passes to step **410** and subsequent steps, described above.

The present invention allows individual transactions to be selectively grouped at the time of entry for treatment as a single transaction for reconciliation purposes. Accounting software employing the present invention may thus maintain more information regarding the transactions and reduce the time and effort required to reconcile accounts with an external statement or records. The present invention may be employed whenever transactions are expected to be consolidated in an external statement or records.

It is important to note that while the present invention has been described in the context of a fully functional data processing system, those skilled in the art will appreciate that the mechanism of the present invention is capable of being distributed in the form of a computer readable medium of instructions in a variety of forms, and that the present invention applies equally regardless of the particular type of signal bearing media used to actually carry out the distribution. Examples of computer readable media include: recordable type media such as floppy disks and CD-ROMs and transmission type media such as digital and analog communication links. In particular, the present invention may be employed in connection with Internet-based banking.

While the invention has been particularly shown and described with reference to a preferred embodiment, it will be understood by those skilled in the art that various changes in form and detail may be made therein without departing from the

spirit and scope of the invention.

CLAIMS:

What is claimed is:

1. A method of facilitating account statement reconciliation, comprising:

associating selected transactions within data records for an account to form a transaction group which may be treated both as a single transaction and as a plurality of individual transactions; and

displaying a total for said transaction group, wherein said total for said transaction group may be readily reconciled with a consolidated entry in an external account statement.

2. The method of claim 1, wherein the step of associating selected transactions within data records for an account to form a transaction group further comprises:

instantiating a container object to contain data records for said transaction group.

3. The method of claim 1, wherein the step of associating selected transactions within data records for an account to form a transaction group further comprises:

supporting selection of multiple data records; and

providing an option for associating multiple selected data records as a transaction group.

4. The method of claim 1, further comprising:

displaying a visual indicator of said association of said transaction group.

5. The method of claim 1, further comprising:

2   forming a plurality of transaction groups within said
3   data records for said account; and
4   displaying a total for each transaction group within said
5   plurality of transaction groups.

1   6.   The method of claim 5, further comprising:
2   identifying unreconciled transactions within data records
3   for said account; and
4   determining whether said unreconciled transactions
5   include at least one transaction from a transaction group.

1   7.   The method of claim 5, further comprising:
2   displaying a visual indicator of each transaction group
3   within said plurality of transaction groups.

1   8.   An apparatus for facilitating account statement recon-
2   ciliation, comprising:
3   association means for persistently associating selected
4   transactions within data records for an account to form a
5   transaction group which may be selectively treated as a single
6   transaction; and
7   display means for displaying a total for said transaction
8   group, wherein said total for said transaction group may be
9   readily reconciled with a consolidated entry in an external
10   account statement.

1   9.   The apparatus of claim 8, wherein said association means
2   further comprises:
3   instantiation means for instantiating a container object
4   to contain data records for said transaction group.

1   10.   The apparatus of claim 8, wherein said association means

2   further comprises:

3   means for supporting selection of multiple data records;

4   and

5   means for providing an option for associating multiple

6   selected data records as a transaction group.

1   11.   The apparatus of claim 8, further comprising:

2   indication means for displaying a visual indicator of

3   said association of said transaction group.

1   12.   The apparatus of claim 8, further comprising:

2   association means for forming a plurality of transaction

3   groups within said data records for said account; and

4   display means for displaying a total for each transaction

5   group within said plurality of transaction groups.

1   13.   The apparatus of claim 12, further comprising:

2   identification means for identifying unreconciled

3   transactions within data records for said account; and

4   determination means for determining whether said

5   unreconciled transactions include at least one transaction

6   from a transaction group.

1   14.   The apparatus of claim 12, further comprising:

2   indication means for displaying a visual indicator of

3   each transaction group within said plurality of transaction

4   groups.

1   15.   A computer program product for use with a data processing

2   system, comprising:

3   a computer usable medium;

4   first instructions on said computer usable medium for

5   associating selected transactions within data records for an

6   account to form a transaction group having a data record

7   distinct from data records for said selected transactions; and

8   second instructions on said computer usable medium for

9   displaying a total for said transaction group, wherein said

10   total for said transaction group may be readily reconciled

11   with a consolidated entry in an external account statement.

1   16.   The computer program product of claim 15, wherein said

2   first instructions further comprise:

3   instructions for instantiating a container object to

4   contain data records for said transaction group.

1   17.   The computer program product of claim 15, wherein said

2   first instructions further comprises:

3   instructions for supporting selection of multiple data

4   records; and

5   instructions for providing an option for creating said

6   data record associating multiple selected data records as a

7   transaction group.

1   18.   The computer program product of claim 8, further

2   comprising:

3   third instructions on said computer usable medium for

4   displaying a visual indicator of said association of said

5   transaction group.

1   19.   The computer program product of claim 15, further

2   comprising:

3   third instructions on said computer usable medium for

4   forming a plurality of transaction groups within said data

5   records for said account; and

6   fourth instructions on said computer usable medium for

7   displaying a total for each transaction group within said

8   plurality of transaction groups.

1   20. The computer program product of claim 19, further

2   comprising:

3   fifth instructions on said computer usable medium for

4   identifying unreconciled transactions within data records for

5   said account; and

6   sixth instructions on said computer usable medium for

7   determining whether said unreconciled transactions include at

8   least one transaction from a transaction group.

1   21. An Internet client, comprising:

2   a data processing system receiving and transferring data

3   over the Internet; and

4   records for account transactions stored within said data

5   processing system, said records including at least one trans-

6   action group record persistently maintaining an association of

7   records for selected transactions within said account trans-

8   actions.

1   22. The Internet client of claim 21, wherein said data

2   processing system further comprises:

3   means for retrieving transaction information over the

4   Internet; and

5   means for comparing said transaction group record to said

6   retrieved transaction information separately from said records

7   for said selected transactions.

1   23. The Internet client of claim 21, wherein said data

2   processing system further comprises:

3   means for displaying a visual indicator of said trans-
4   action group in a display of said records for said selected
5   transactions.

1   24.   The Internet client of claim 21, wherein said data
2   processing system further comprises:
3   means for uniformly indicating a state of each of said
4   selected transactions.

1   25.   An Internet server, comprising:
2   a data processing system receiving and transferring data
3   over the Internet;
4   a storage device maintaining account transaction records
5   for an account; and
6   software operable in said data processing system for:
7   receiving an external request for transaction
8   records for said account over the Internet;
9   comparing said external transaction records to said
10   account transaction records;
11   transmitting said account records over the Internet;
12   and
13   transmitting a signal over the Internet for
14   initiating a determination of whether said account
15   records includes a match to a transaction group.

1   26.   A method of automatically reconciling account transaction
2   records with user transaction records over the Internet,
3   comprising:
4   transmitting information regarding an account from a
5   server over the Internet to a user unit;
6   comparing said information regarding said account to
7   corresponding information from said user transaction records;

8   determining matches between said account information and
9   said user transaction records at said user unit;
10   identifying transaction groups for which a match is
11   determined; and
12   altering a state associated with user transaction records
13   for individual transactions within said transactions groups.

1   27.   The method of claim 26, wherein the step of transmitting
2   information regarding an account from a server over the
3   Internet to a user unit further comprises:
4   formatting a request for said information in HTML.

1   28.   The method of claim 26, wherein the step of determining
2   matches between said account information and said user trans-
3   action records at said user unit further comprises:
4   identifying user transaction records matching said
5   account information which persistently maintain an association
6   of selected user transaction records.

1   29.   The method of claim 28, wherein the step of altering a
2   state associated with user transaction records for individual
3   transactions within said transactions groups further
4   comprises:
5   altering a flag associated with said selected user
6   transaction records.

ABSTRACT OF THE DISCLOSURE
GROUPING SELECTED TRANSACTIONS IN ACCOUNT LEDGER

At the time transactions are entered into accounting software data records, a user is given the option of creating a transaction group for transactions expected to appear in an external statement as a single entry. A persistent record of the association of selected transactions is maintained in the data records, and a total for transaction groups is displayed to the user during the reconciliation of the data records with the external statement. The user may then easily reconcile multiple entries in the data records which were consolidated in the external statement.

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102

USER UNIT

104

106

INTERNET

108

110

112

SD
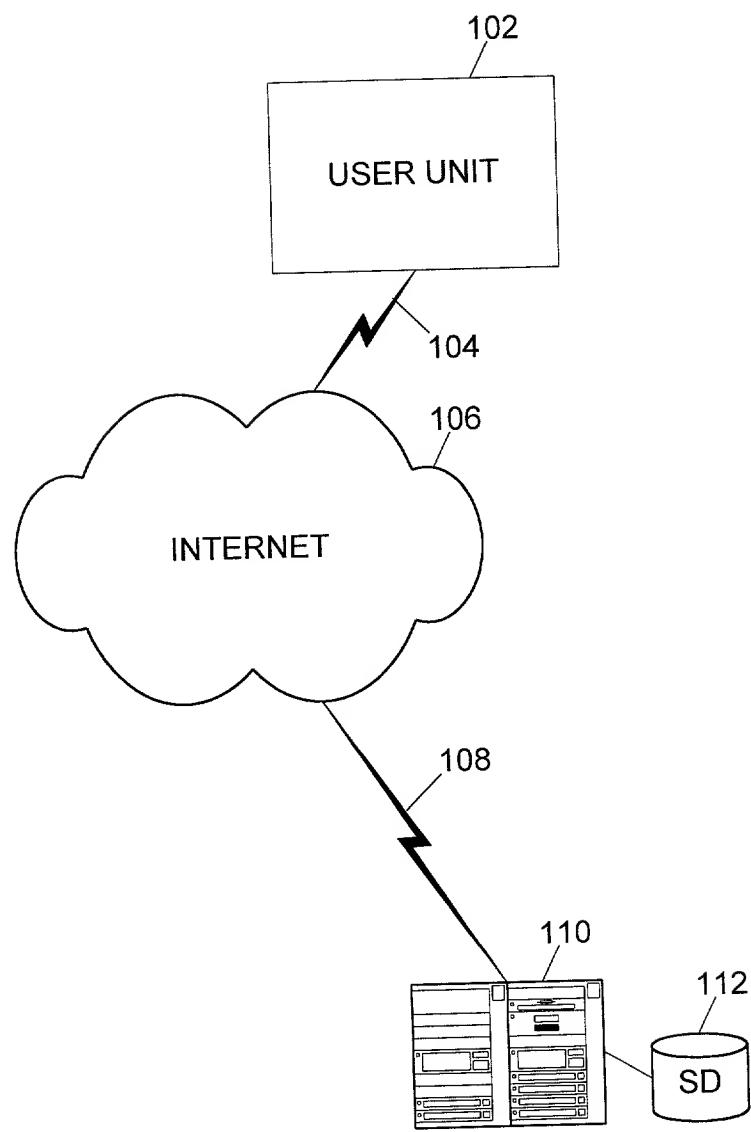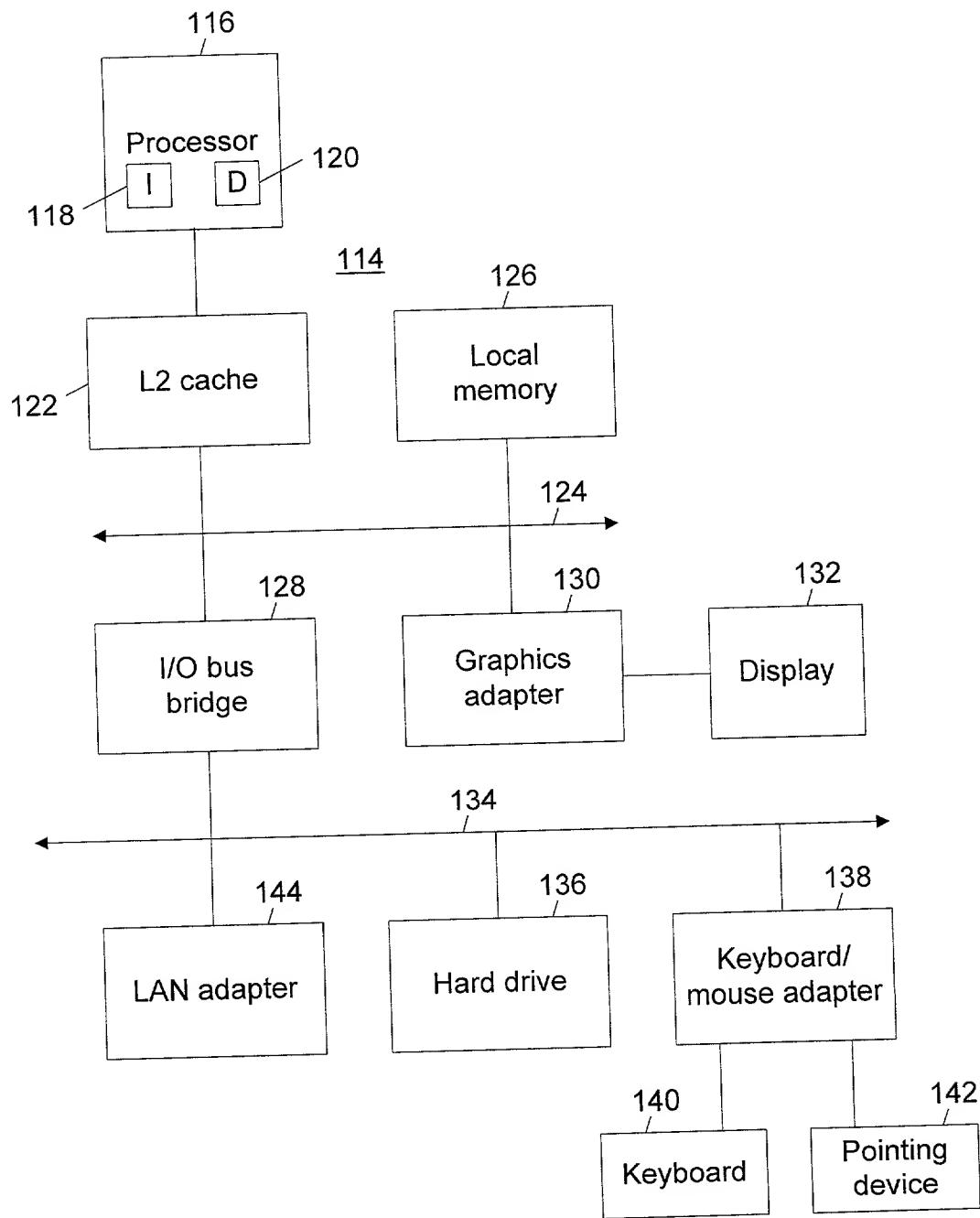
Figure 1A

Figure 1B

204   206   208   210

1002	5/14	Check from Sis		25.00	
34987	5/15	Paycheck		1816.72	
00100	5/15	Tax refund		542.17	
22213	5/15	Mail-in rebate		3.00	
34988	5/31	Paycheck		1816.72	

212

202

Figure 2A

204   206   216   208   210

1002	5/14	Check from Sis	✓	25.00	
34987	5/15	Paycheck	✓	1816.72	
00100	5/15	Tax refund	✓	542.17	
22213	5/15	Mail-in rebate	✓	3.00	2361.89
34988	5/31	Paycheck		1816.72	

214

202

Figure 2B

Figure 3

```mermaid
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(Initiate reconciliation) — 402

Identify unreconciled transactions — 404

— 406a
Unreconciled transaction groups?

no →

yes ↓

Display totals for transaction groups — 408a

— 410
Transaction group matched? → no

yes ↓

Mark each transaction in group reconciled — 412

(Idle) — 414
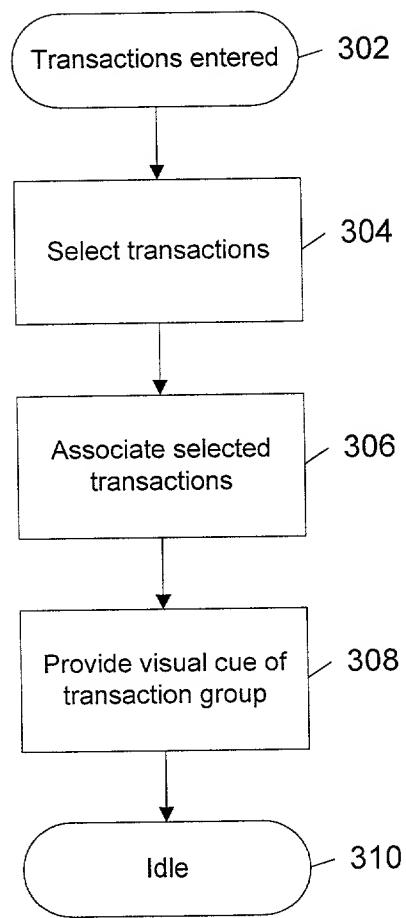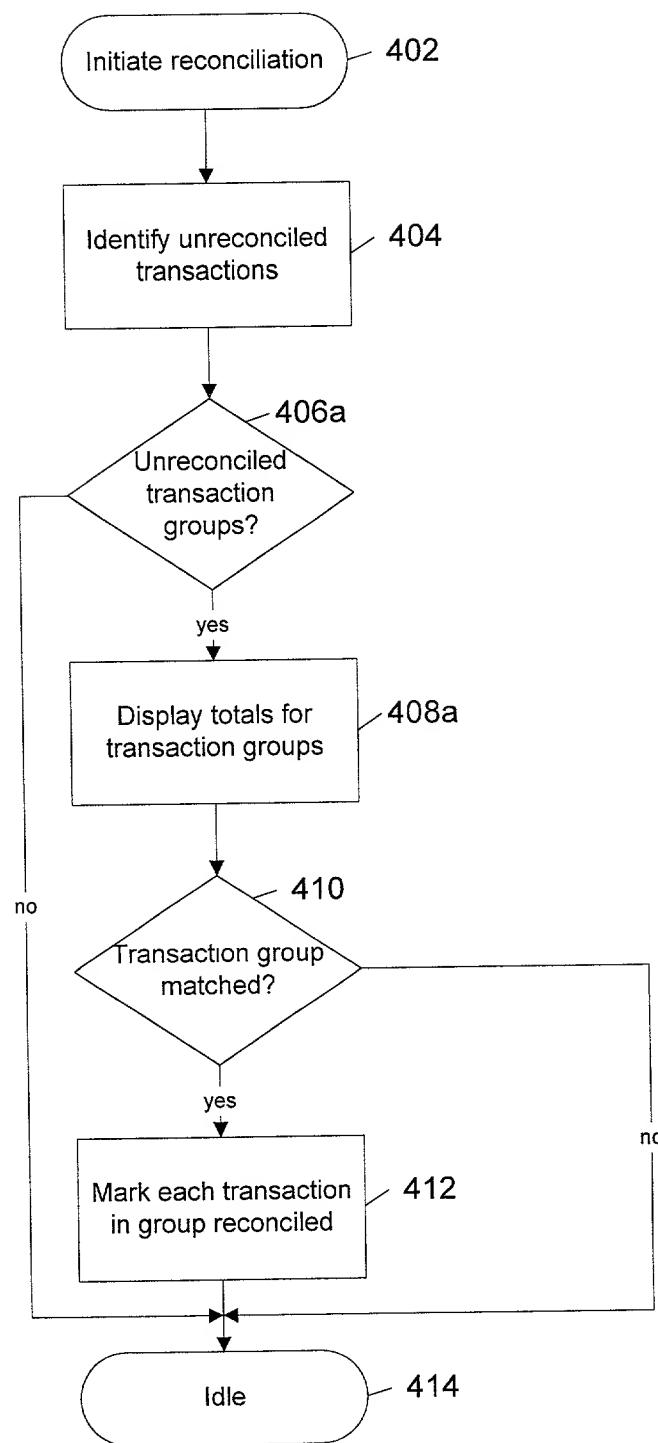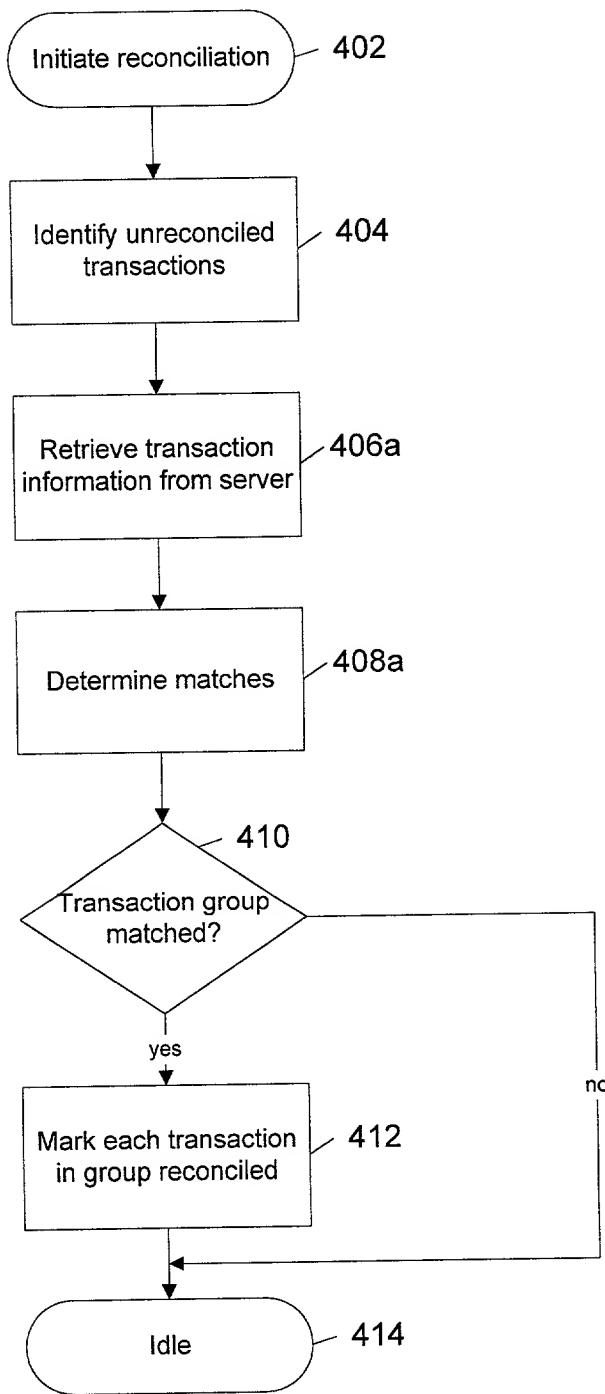
Figure 4A

Figure 4B

DECLARATION AND POWER OF ATTORNEY FOR

PATENT APPLICATION

As a below named inventor, I hereby declare that:

My residence, post office address and citizenship are as stated next to my name:

I believe I am an original, first and sole inventor (if only one name is listed below) or and original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled

GROUPING SELECTED TRANSACTIONS IN ACCOUNT LEDGER _____

the specification of which (check one)
XX_____ is attached hereto
_____ was filed on _____
          as Application Serial No. _____
          and was amended on _____
                                         (if applicable)

I hereby state that I have reviewed and understand the contents of the above-identified specification, including the claims, as amended by any amendment referred to above.

I acknowledge the duty to disclose information which is material to the patentability of this application in accordance with Title 37, Code of Federal Regulations, § 1.56.

I hereby claim foreign priority benefits under Title 35, United States Code, § 119 of any foreign application(s) for patent or inventor's certificate listed below and have also identified below any foreign application for patent or inventor's certificate having a filing date before that of the application on which priority is claimed:

Prior Foreign Application(s):   Priority Claimed

                                                                  ____ Yes ____ No
_____ _____ _____
      (Number)   (Country)   (Day/Month/Year)

I hereby claim the benefit under Title 35, United States Code, § 120 of any United States application(s) listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States application in the manner provided by the first paragraph of Title 35, United States Code, § 112, I acknowledge the duty to disclose information material to the patentability of this application as defined in Title 37, Code of Federal Regulations, § 1.56 which occurred between the filing date of the prior application and the national or PCT international filing date of this application:

_____ _____ _____
(Application Serial No.)   (Filing Date)   (Status)

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

POWER OF ATTORNEY: As a named inventor, I hereby appoint the following attorneys and/or agents to prosecute this application and transact all business in the Patent and Trademark Office connected therewith.

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.The total filing fee has been calculated as follows:

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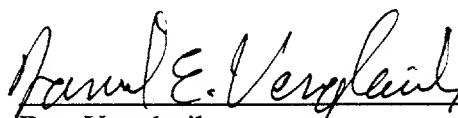
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Enclosures